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| 10/658,161  | 09/09/2003  | Jeyhan Karaoguz      | 14167US02           | 5714             |
| 23446 7590 01/04/2010<br>MCANDREWS HELD & MALLOY, LTD<br>500 WEST MADISON STREET<br>SUITE 3400<br>CHICAGO, IL 60661 |             |                      |                     |                  |
| EXAMINER<br>RUSSELL, WANDA Z  |             |                      |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/658,161

**Applicant(s)**

KARAOGUZ ET AL.

**Examiner**

WANDA Z. RUSSELL

**Art Unit**

2462

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/CD)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1-42** are rejected under 35 U.S.C. 102(e) as being anticipated by Chapman et al. (U.S. Patent 6,643,292 B2, hereafter Chapman).

For **claims 1, 11, 21, 31, and 41**, Chapman teaches a method, a machine-readable storage (see processor and protocols in Fig. 8. It means that machine-readable storage is used), a system (see Fig. 8) for providing enhanced connectivity (packet data transport mechanism, see title) in a multi-band (see three customer equipments to Input module in Fig. 8, and customer digital data – voice and data, see col. 3, line 26, and col. 1, line 33. It is well known in the art that voice and data are in different bands. Those mean multi-band), multi-protocol network (TCP/IP, see Fig. 8, and DHCP, see col. 5, line 17, and RSVP, see col. 6, line 50. All are used for this system. In addition, it is known in the art that based on IEEE 802.11 standard, measurement protocol and TPC protocol can be used), comprising:

aggregating messages of each communication channel from a physical layer (see Encapsulation Module 84 in Fig. 8; In Internet terminology, aggregating traffic

streams by encapsulating them into a single IP stream is often called tunneling, see col. 2, lines 55-57) of each communication band and each communication channel (see three customer equipments to Input module in Fig. 8, and customer digital data, see col. 3, line 26. Each customer occupies a channel and each channel has voice and data that is multi-band) associated with each of a plurality of protocols (TCP/IP, see Fig. 8, and DHCP, see col. 5, line 17, and RSVP, see col. 6, line 50) in a single multi-protocol layer of the multi-protocol network (see 84 in Fig. 8, and It is commonly understood in the field of the present invention that a layer under the networking layer is called "transport" layer ... This is in contrast to the layered model of the OSI, see col. 2, lines 33-35 and lines 33-42);

identifying an optimal communication path from among said communication channel based on said single multi-protocol layer (in the packet transport network to allow the set-up of paths with a particular performance over and above best effort, see col. 6, lines 52-53); and

establishing a communication session using said identified optimal communication path (see Tx module 92 in Fig. 8. Once the best path is established, as stated above, the Tx module can only use the established path).

For **claims 2, 12, 22, 32, and 42**, Chapman teaches comprising determining based on said aggregated messages, whether at least one of said communication channels, said communication bands, and a combination of said communication channels and said communication bands provides said optimal communication path for

said communication session (in the packet transport network to allow the set-up of paths with a particular performance over and above best effort, see col. 6, lines 52-53).

For **claims 3, 13, 23, and 33**, Chapman teaches comprising selecting at least one of said communication and communication bands, and a combination of said communication channels and said communication bands for providing said communication session (see Customer equipments, Input module 80, and Tx module 92 in Fig. 8, and customer digital data, see col. 3, line 26).

For **claims 4, 14, 24, and 34**, Chapman teaches comprising locating said single multi-protocol as a sublayer within a data link layer (It is commonly understood in the field of the present invention that a layer under the networking layer is called "transport" layer ... This is in contrast to the layered model of the OSI ... The data link layer provides similar functionalities to those of the transport layer of the present description, see col. 2, lines 33-42. It can be seen that this "transport" layer is a sublayer within a data link layer).

For **claims 5, 15, 25, and 35**, Chapman teaches comprising interfacing said single multi-protocol layer above a MAC layer, said MAC layer interfaced with said physical layer that is located below said MAC layer (see Applicant's Fig. 1a. The "transport" layer defined by Chapman is within a data link layer, and the data link layer is above MAC layer. And, Fig. 1a is a block diagram of the OSI model, see Applicant's specification, P.2, lines 5-6. OSI model is a well-known model, and the Fig.1a is admitted prior art).

For **claims 6, 16, 26, and 36**, Chapman teaches wherein said single multi-protocol layer is a super channel sublayer, said super channel sublayer being said sublayer of said data link layer (It is commonly understood in the field of the present invention that a layer under the networking layer is called "transport" layer ... This is in contrast to the layered model of the OSI ... The data link layer provides similar functionalities to those of the transport layer of the present description, see col. 2, lines 33-42. It can be seen that this "transport" layer, called super layer by the Applicant, is a sublayer within a data link layer).

For **claims 7, 17, 27, and 37**, Chapman teaches comprising monitoring at least a portion of said aggregated messages in said single multi-protocol layer by at least one of a network management process (network management, see col. 6, line 10), a bandwidth management process (providing services with bandwidth guarantees, see col. 4, line 64), a load balancing process (TCP is also inherently provides for resequencing of out-of-order packets which can occur when switching nodes spread load over multiple links, see col. 2, lines 65-67), a session control and a QoS management process (QoS management, see col. 8, line 51).

For **claims 8, 18, 28, and 38**, Chapman teaches comprising interfacing at least one of said network management process, bandwidth management process, load balancing process, session control process and QoS management process with said super channel (It should be noted that the transport network will be much less subject to change than the public internet making it simpler to introduce quality of service features, see col. 6, lines 54-57).

For **claims 9, 19, 29, and 39**, Chapman teaches comprising extracting channel specific data from said single multi-protocol layer by at least one of said network management process, bandwidth management process, load balancing process, session control process and QoS management process (An encapsulation module 84 encapsulates those digital data flows so identified in a series of TCP segments and with a help of an IP header module 86 attaches to each transport IP packet a transport IP header, containing the address of the destination transport access point, see col. 7, lines 43-47).

For **claims 10, 20, 30, and 40**, Chapman teaches comprising sharing channel information acquired by each of said network management process, bandwidth management process, load balancing process, session control process and QoS management process among one or more of said network management process, bandwidth management process, load balancing process, session control process and QoS management process (It is another object of the invention to provide a technique of one or more connections dynamically sharing the bandwidth of a pipe created between two transport access points, see col. 3, lines 6-8).

### ***Response to Arguments***

3. Applicant's arguments filed 10/19/2009 have been fully considered but are not persuasive.
4. For claim 1, Applicant argues that there is no such support in Chapman that the input flows are "multi-band" communications.

In response, the Examiner respectfully disagrees.

Chapman teaches providing enhanced connectivity (packet data transport mechanism, see title) in a multi-band (see three customer equipments to Input module in Fig. 8, and customer digital data – voice and data, see col. 3, line 26, and col. 1, line 33). It is well known in the art that voice and data are in different bands. Those mean multi-band.

5. Still for claim 1, Applicant argues that Chapman does not disclose or suggest at least the limitation of "identifying an optimal communication path from among said communication band and said communication channel based on said aggregated messages in said single multi-protocol layer."

In response, the Examiner respectfully disagrees.

Chapman teaches identifying an optimal communication path from among said communication channel based on said single multi-protocol layer (in the packet transport network to allow the set-up of paths with a particular performance over and above best effort, see col. 6, lines 52-53). This path is for multi-protocol layer (TCP/IP, see Fig. 8, and DHCP, see col. 5, line 17, and RSVP, see col. 6, line 50. All are used for this system. In addition, it is known in the art that based on IEEE 802.11 standard, measurement protocol and TPC protocol can be used).

6. Still for claim 1, Applicant argues that Chapman does not disclose or suggest at least the limitation of "establishing a communication session using said identified optimal communication path."

In response, the Examiner respectfully disagrees.



Chapman teaches establishing a communication session using said identified optimal communication path (see Tx module 92 in Fig. 8. Once the best path is established, as stated in Section 5, the Tx module can only use the established path).

7. Other independent claims have the same issues as discussed above.
8. Rejections of dependent claims remain effective. See details above.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WANDA Z. RUSSELL whose telephone number is (571)270-1796. The examiner can normally be reached on Monday-Thursday 9:00-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin C. Harper/  
Primary Examiner, Art Unit 2462

WZR/Wanda Z Russell/  
Examiner, Art Unit 2416